



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/605,930	11/06/2003	Liwen Xu	81044242(FGT1865)	2929
28549	7590	06/15/2006	EXAMINER	
ARTZ & ARTZ, P.C. 28333 TELEGRAPH ROAD, SUITE 250 SOUTHFIELD, MI 48034			NGUYEN, TAN QUANG	
			ART UNIT	PAPER NUMBER
			3661	

DATE MAILED: 06/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.



**UNITED STATES DEPARTMENT OF COMMERCE
U.S. Patent and Trademark Office**

Address : COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450

APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
---------------------------------	-------------	---	---------------------

EXAMINER

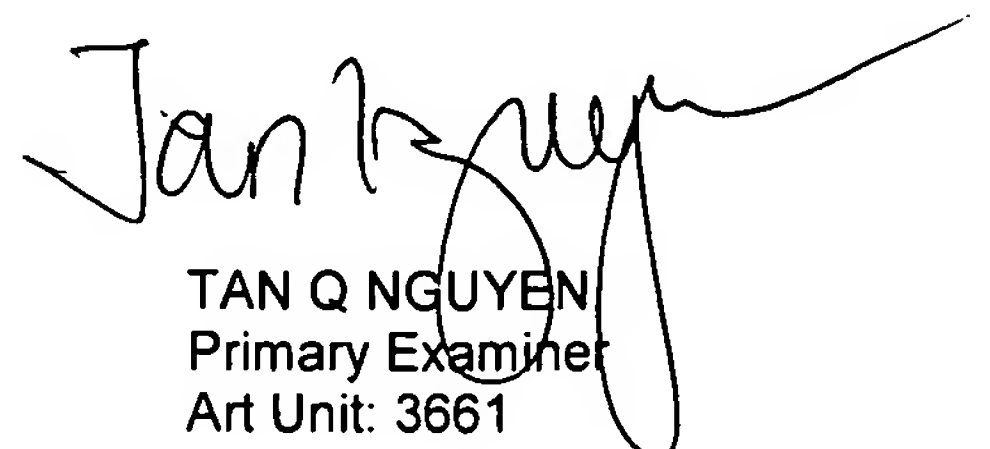
ART UNIT	PAPER
----------	-------

20060612

DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner for Patents


TAN Q NGUYEN
Primary Examiner
Art Unit: 3661

Office Action Summary	Application No.	Applicant(s)	
	10/605,930	XU ET AL.	
	Examiner	Art Unit	
	TAN Q. NGUYEN	3661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-160 is/are pending in the application.
- 4a) Of the above claim(s) 36-160 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAIL ACTION

Notice to Applicant(s)

1. This office action is responsive to the amendment filed on response to the April 13, 2006. Claims 1-160 are pending, while the non-elected claims 36-160 have been withdrawn.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-10, 14-16, 21-29, and 33-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer (6,757,595) in view of Suzuki et al. (6,535,114).

5. With respect to claims 1 and 2, Bauer discloses a stability control system for an automotive vehicle which includes a rollover control system and a controller for generating a dynamic vehicle characteristic in response to the roll parameter (see at least the abstract, figure 3, column 2, lines 11-20, and column 3, line 45 to column 4, line 27).

6. Bauer suggests the roll parameter is typically estimated from available sensors as is known in the art (see column 3, lines 53-55). Bauer does not disclose a camera-based vision system for generating a roll angle. However, Suzuki et al. suggest a system and method for optically monitoring the environment of a moving vehicle which includes a camera for generating a roll parameter for use in controlling the engine, brake, transmission, steering, etc. (see figures 2, 4A-6). It would have been obvious to an ordinary skill in the art to incorporate the teaching of the Suzuki et al. into the system of Bauer in order to provide the system with the enhanced capability of optically monitoring the environment of a moving vehicle and using it for controlling the rollover of vehicle.

7. With respect to claim 3, Bauer also discloses that the system includes a yaw control system (see at least figure 2B and column 3, lines 28-44).

8. With respect to claim 4, Bauer also discloses that the system includes a pitch angle signal (see column 1, lines 19-26).

9. With respect to claims 5 and 6, Bauer further discloses that the system includes a lateral accelerometer signal (or lateral velocity) for determining a loss of control and use it for controlling the rollover for the vehicle (see at least column 1, lines 19-26, figures 2B, 3 and the related text).

10. With respect to claim 7, Bauer also discloses a longitudinal acceleration signal (or longitudinal velocity) for use in controlling the rollover (see column 1, lines 19-26).

11. With respect to claims 8-10, Bauer does not disclose a road departure signal or an in-path object signal for use in controlling the rollover for the vehicle. However, Suzuki et al. do suggest a method for optically monitoring the environment of a moving vehicle which includes the road departure and in-path object parameter (see at least the abstract). It would have been obvious to an ordinary skill to incorporate such teaching of Suzuki et al. into the system of Bauer in order to take the information of the area surrounding the moving vehicle for improving the controlling the rollover for the vehicle.

12. With respect to claims 14-16, Bauer also suggests the use of wheel speed, wheel slip, rotational moment, and body side slip into account for controlling rollover condition (see at least figures 2A, 2B and the related text).

13. Claims 21-29 and 33-35 are method claims corresponding to apparatus claims 1-10 and 14-16. Therefore, claims 21-29 and 33-35 are rejected for the same rationales set forth for claims 1-10 and 14-16.

14. Claims 11-13 and 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer and Suzuki et al. as applied to the claims above, and further in view of Griessbach (6,169,946).

15. Bauer and Suzuki et al. disclose the claimed invention as discussed above except a wheel lifted signal is used for controlling the roll controlling system. However, such feature is suggested in at least figure 3 and the related text of Griessbach. It would have been obvious to an ordinary skill in the art at the time the invention was made to incorporate the teaching of Griessbach into the combined system of Bauer and Suzuki et al. in order to use the wheel lift information in controlling the rollover, thereby to improving the vehicle safety.

16. Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer and Suzuki et al. as applied to the claims above, and further in view of Ishikawa et al. (6,292,111).

17. Bauer and Suzuki et al. disclose the claimed invention as discussed above except for the camera-based vision system comprises a stereo pair of cameras, and can be mounted in front or rear and on the side of the vehicle. However, such system using the stereo cameras is suggested in at least figures 1E, 2, and the related text of the Ishikawa et al. It would have been obvious to one of an ordinary skill in the art to incorporate such teaching of Ishikawa et al. into the combination system of Bauer and Suzuki et al. in order to monitor better the environment surrounding the moving vehicle by using two cameras, one for the front or rear, and one on the side, for further providing the more accurately the inclination angle.

18. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer and Suzuki et al. as applied to the claims above, and further in view of Nishikawa (5,913,375).

19. Bauer and Suzuki et al. disclose the claimed invention as discussed above except that the system includes a radar system for generating environment sensing signal. However, such method of using both camera system and radar system for detecting the environment of the moving vehicle and as shown in at least figure 3 of the Nishikawa reference. It would have been obvious to an ordinary skill in the art to incorporate the teaching of Nishikawa into the combination system of Bauer and Suzuki et al. in order to provide the more accurate the information of the environment of the moving vehicle, which in turn improving the rollover control system.

Remarks

20. Claims 1-35 are rejected. Claims 36-160 have been withdrawn.

21. The Applicant's arguments filed on September 27, 2005 have been fully considered and they are not deemed to be persuasive.

22. In the amendment, applicants essentially argue that the reference Bauer "does not disclose or suggest a system controlling the vehicle during a roller situation or a roller over controller, as does claim 1; it merely suggest that the tendency to rollover will be reduced through the operation of its system and method". Examiner disagreed and provided that the "system and method for reducing rollover equivalent to the rollover controller since it control the rollover. Applicant further argued that "Bauer does not address any sort of remote sensors". It is noted that the "remote sensors" feature is not claimed. Examiner provides the second reference which suggest the use of a camera for detecting a roll parameter as shown in at least figures 2, 4A-6 and the related text. It would have been obvious to an ordinary skill in the art at incorporate such teaching of the camera into the system of Bauer in order to generate the roll parameter from the use of camera. Therefore, the rejection under 35 U.S.C. § 103 is considered to be proper.

23. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

24. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

Art Unit: 3661

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Tan Q. Nguyen, whose telephone number is (571) 272-6966. The examiner can normally be reached on Monday-Thursday from 5:30 AM-4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black, can be reached on (571) 272-6956.


Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to the Official Fax Center: (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/tqn
June 12, 2006


TAN Q. NGUYEN
Primary Examiner
Art Unit 3661